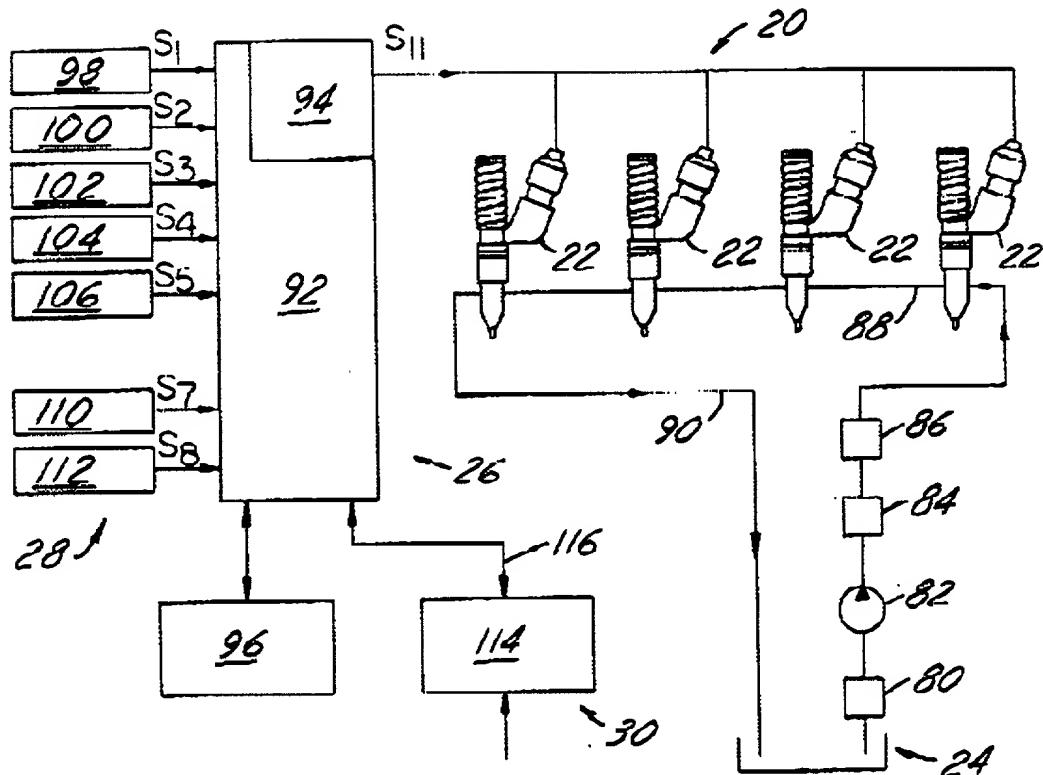
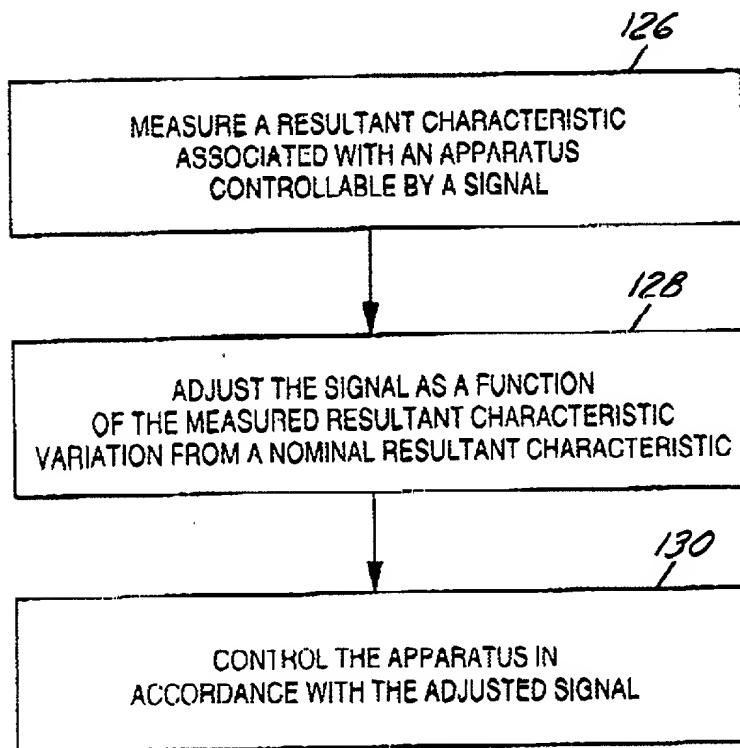


117

FIG. 1FIG. 4

217

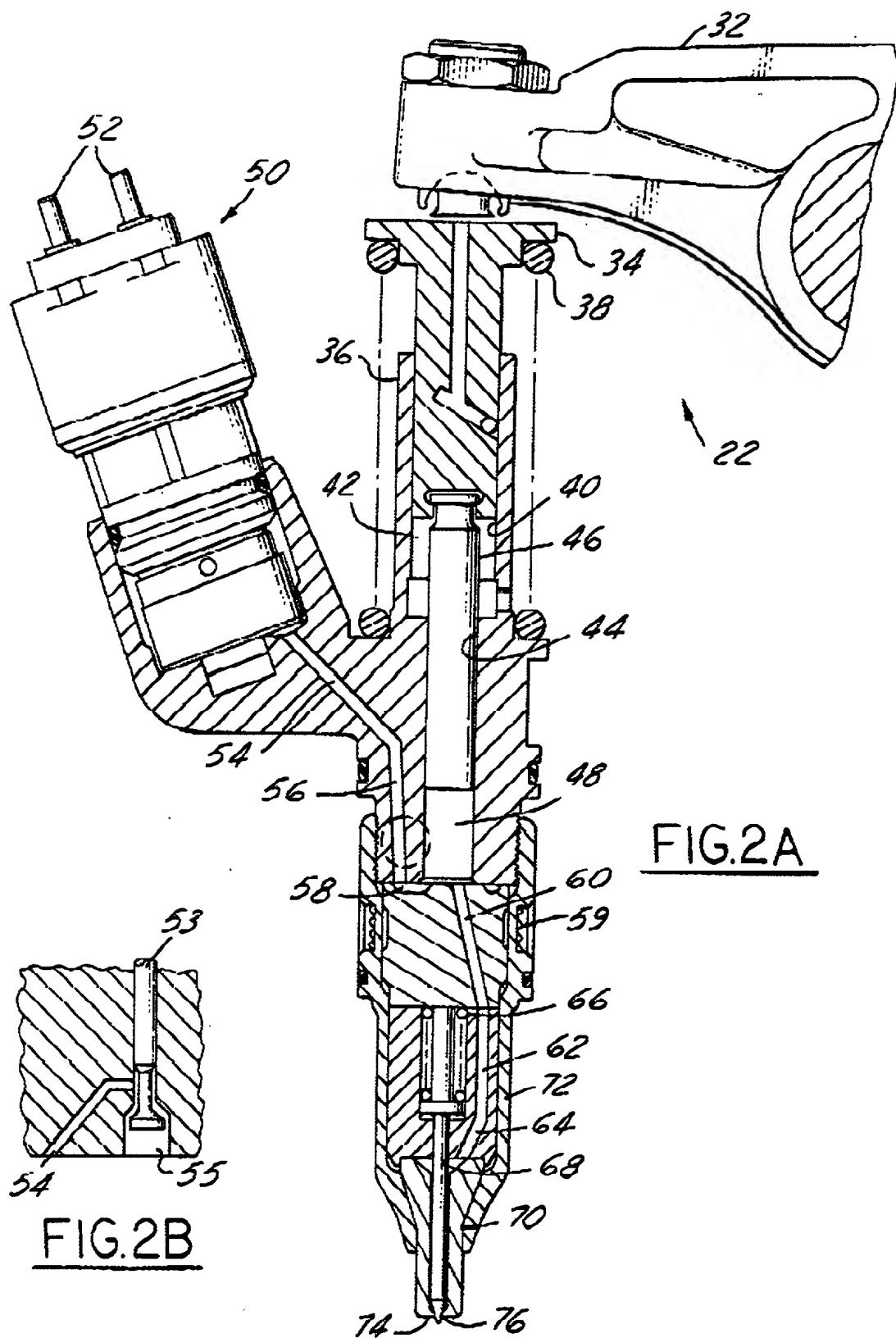
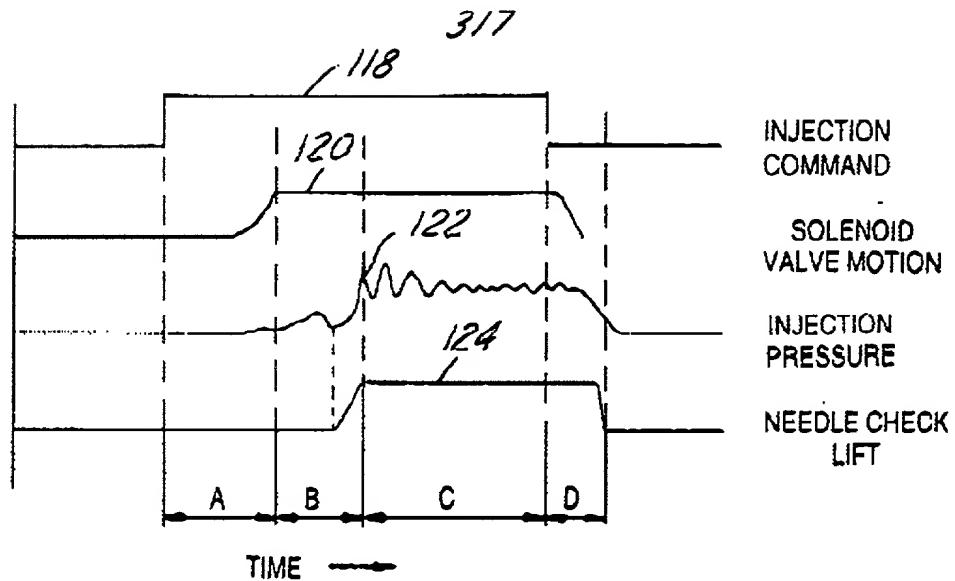
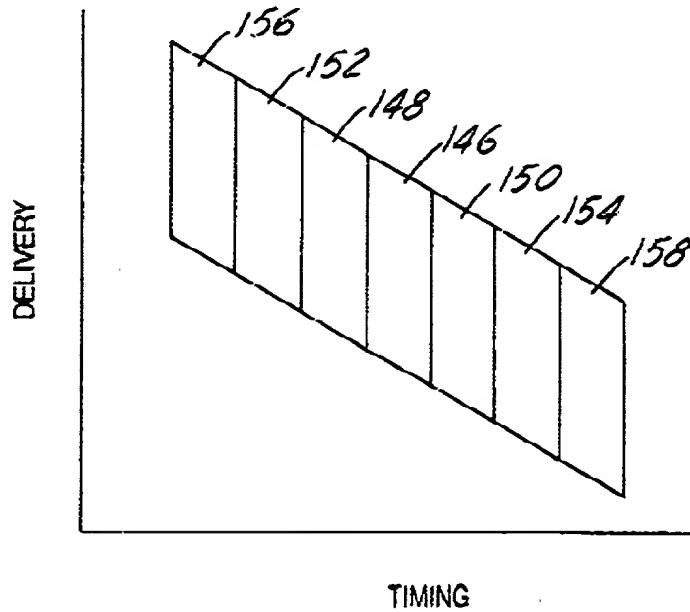
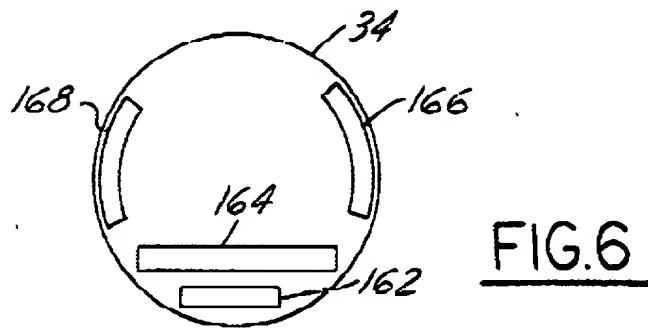
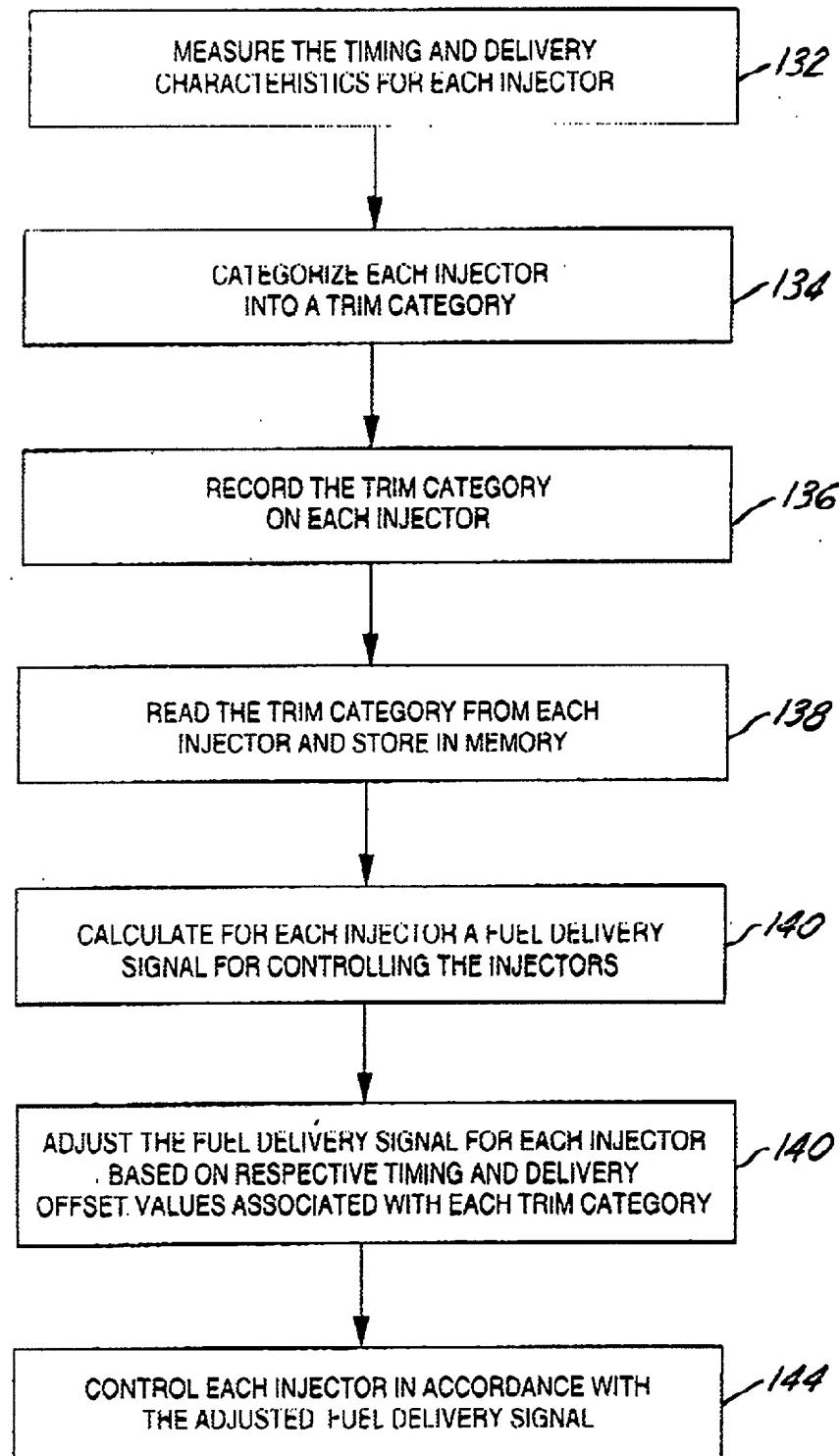


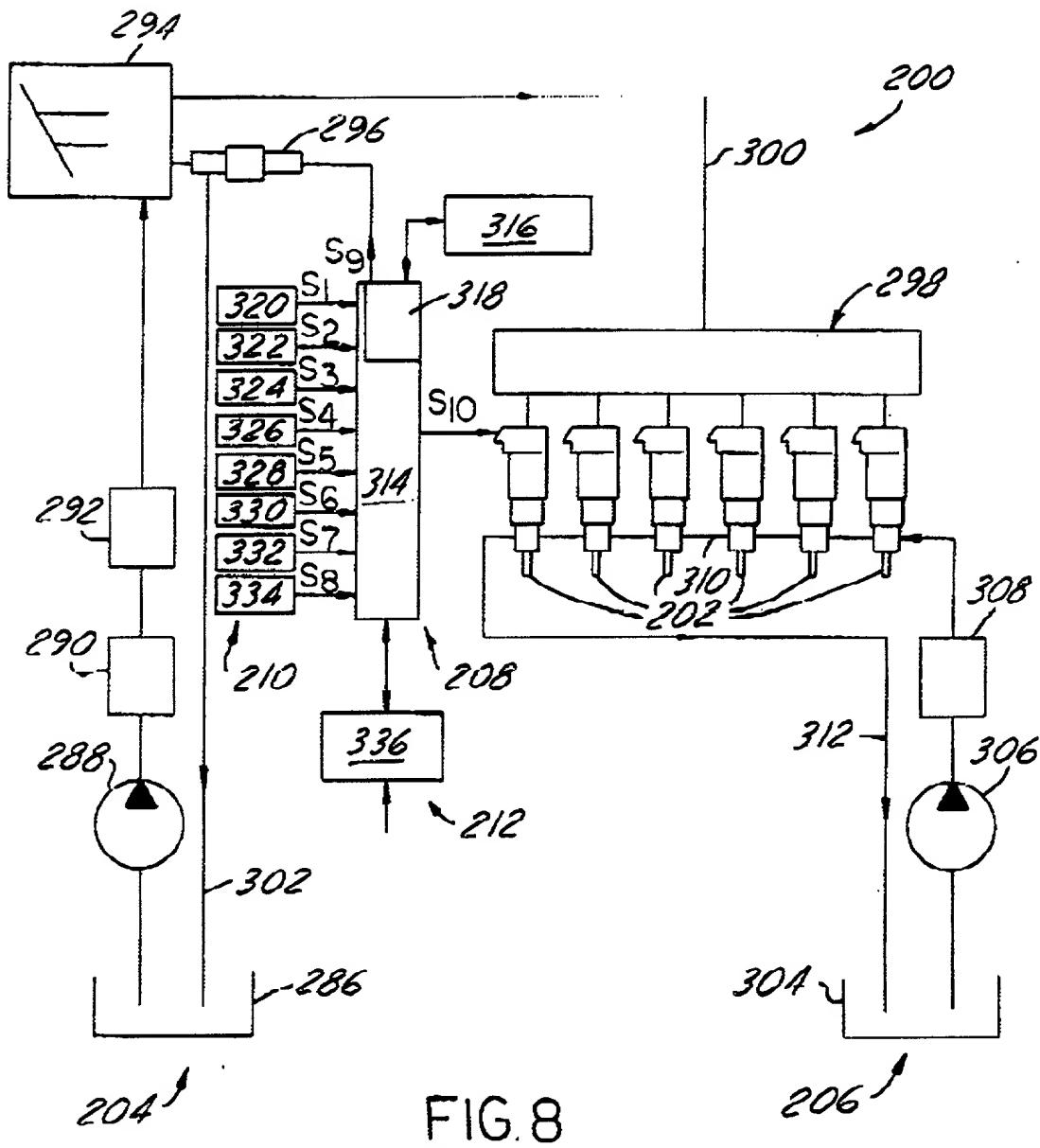
FIG.2B

FIG.3FIG.5FIG.6

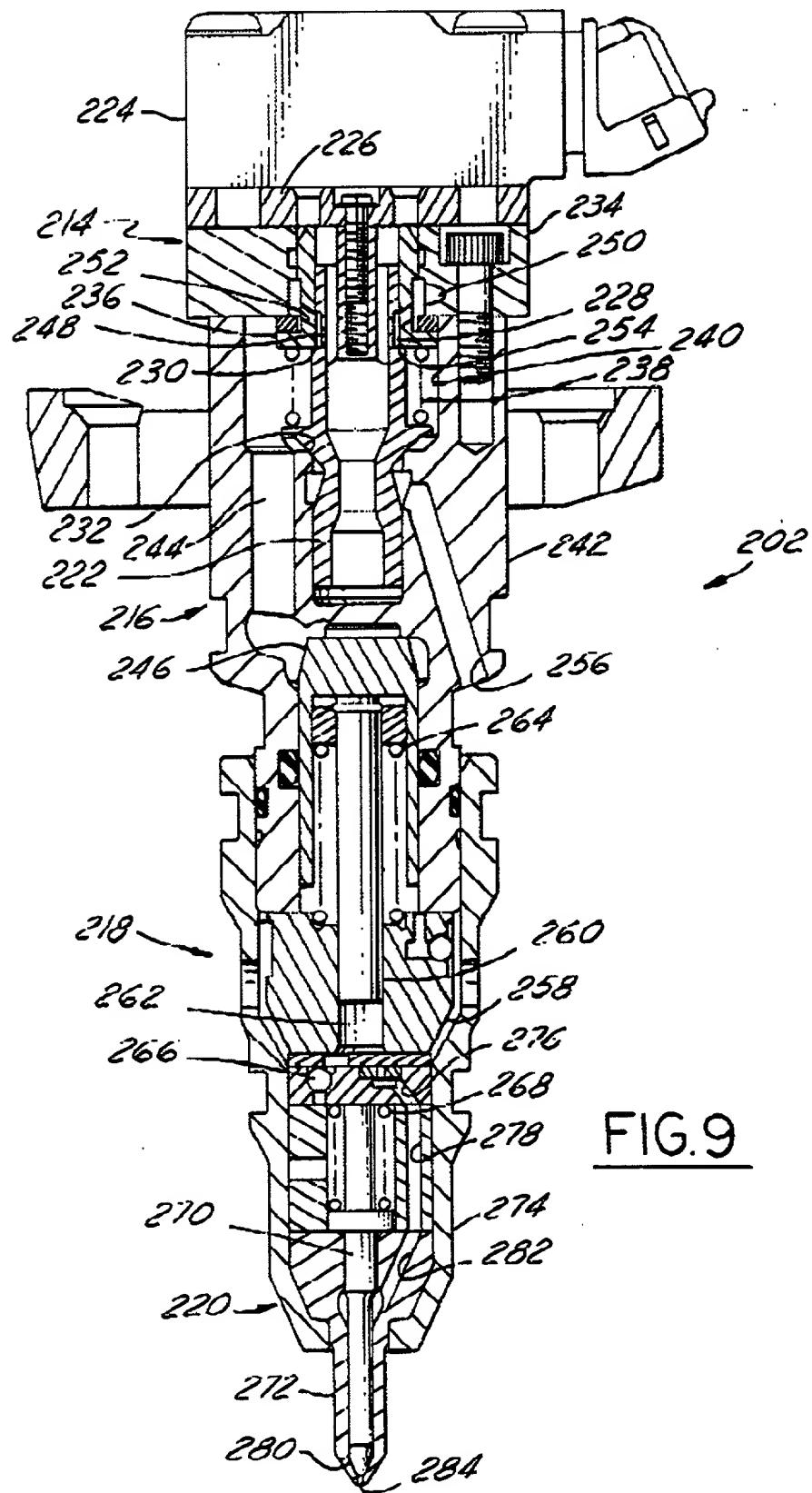
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FIG. 7

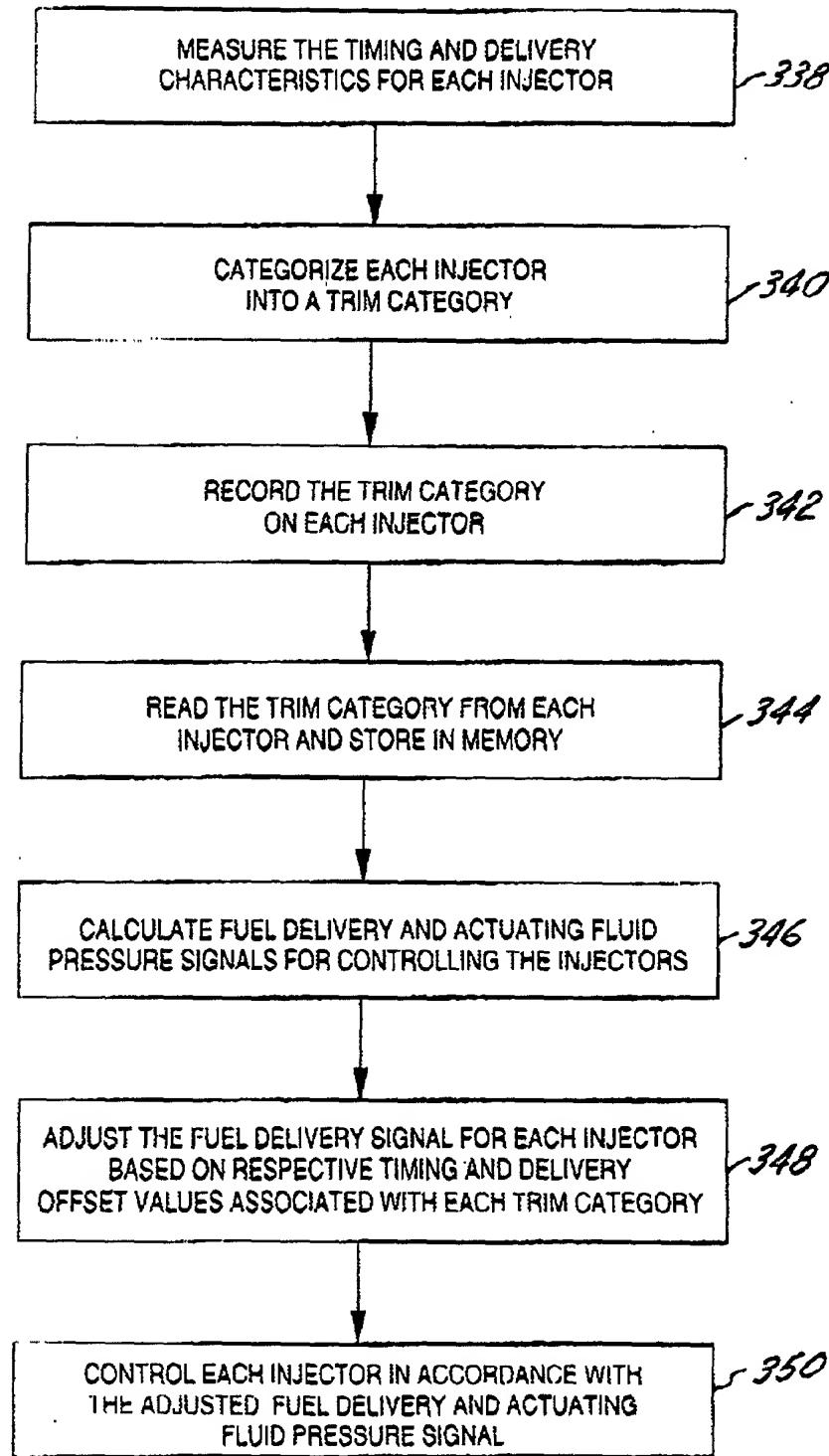
517



611



717

FIG.10

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of)
Shinogle, Ronald D.) Art Unit: 3747
Application No. 09/322,770) Examiner: Not Assigned
Filed: May 28, 1999) Paper No.
For: Method And Structure For)
Controlling An Apparatus.)
Such As A Fuel Injector,)
Using Electronic Trimming)
Attorney Docket No. 87-146)

)

Peoria, Illinois 61629-6490
April 12, 2000

Assistant Commissioner for Patents
Washington, D.C. 20231

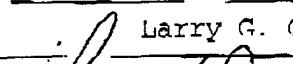
Reissue Application Declaration By The Inventors

Sir:

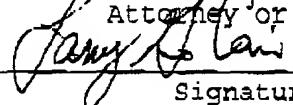
CERTIFICATE OF MAILING

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on April 12, 2000 (Date)


Larry G. Cain


Attorney or Agent

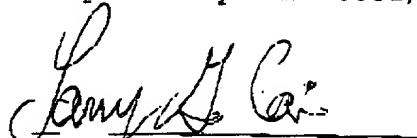

Signature

Date: April 12, 2000

-2-

The last of the "DECLARATION AND POWER OF ATTORNEY" as received in this office today, March 28, 2000, the Yasser A. Charif DECLARATION AND POWER OF ATTORNEY and the DECLARATION AND POWER OF ATTORNEY for Richard A. DeKeyser, Vernon R. Smith and Stephen F. Glassey are being forwarded in response to the Notice Of Incomplete Reply dated, November 19, 1999. The applicants has enclosed the "Declaration And Power Of Attorney" for the inventors of record. The applicants have identified the original patent number and grant date for which a reissue patent is sought. The applicants have further clarified the reason a reissue patent has been sought, i.e. patentee claiming more or less than he had the right to claim in the patent.

Respectfully submitted,



Larry G. Cain

Registration No. 31, 150
Caterpillar Inc.

Telephone: (309) 675-4922

Faxsimile: (309) 675-1236

87-1462 Inventor Declaration.doc

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Docket Number (Optional)

87-146R

REISSUE APPLICATION DECLARATION BY THE INVENTOR

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are stated below next to my name.

I believe I am the original first and sole inventor (or a joint inventor listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is described and claimed in patent number 5,634,448, granted June 3, 1997, and for which a reissue patent is sought on the invention entitled METHOD AND STRUCTURE FOR CONTROLLING AN APPARATUS, SUCH AS A FUEL INJECTOR, USING ELECTRONIC TRIMMING, the specification of which

Is attached hereto.

was filed on May 28, 1999 as reissue application number 09 / 322,770 and was amended on _____
(If applicable)

I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

I verily believe the original patent to be wholly or partly inoperative or invalid, for the reasons described below. (Check all boxes that apply.)

by reason of a defective specification or drawing.
 by reason of the patentee claiming more or less than he had the right to claim in the patent.
 by reason of other errors.

At least one error upon which reissue is based is described as follows:

Not claiming an apparatus as defined in new claim 32.

[Page 1 of 2]

Burden Hour Statement: This form is estimated to take 0.5 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

87-146R

All errors corrected in this reissue application arose without any deceptive intention on the part of the applicant. As a named inventor, I hereby appoint the following attorney(s) and/or agent(s) to prosecute this application and transact all business in the Patent and Trademark Office connected therewith.

Name(s)	Larry G. Cain	Registration Number	31,150
	Joseph W. Keen		28,432
	Robert J. Hampsch		36,155
	Kevin M. Kercher		33,408
	R. Carl Wilbur		36,056

Correspondence Address: Direct all communications about the application to:

 Customer Number

9061



OR

Type Customer Number here

Place Customer Number Bar
Code Label here

<input checked="" type="checkbox"/> Firm or Individual Name	Caterpillar Inc.			
Address	Patent Department, AB6490			
Address	100 NE Adams ST.			
City	Peoria	State	IL	ZIP 61629-6490
Country	USA			
Telephone	(309) 675-4922	Fax	(309) 675-1236	

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine and imprisonment, or both, under 18 U.S.C. 1001, and that such willful false statements may jeopardize the validity of the application, any patent issuing thereon, or any patent to which this declaration is directed.

Full name of sole or first inventor (given name, family name)

Stephen F. Glassey

Inventor's signature

Residence

Gulnare, Colorado 81042

Date

4/5/2000

Post Office Address

21750 Spirit Mountain Drive

Citizenship

US

Full name of second joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of third joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

 Additional joint inventors are named on separately numbered sheets attached hereto.

(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

87-146R

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	Kevin M. Kercher		33,408
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Full name of sole or first inventor (given name, family name)

Richard A. De Keyser

Inventor's signature

Date

4-10-00

Residence

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Citizenship

Post Office Address

614 Horseshoe Tr.

US

Full name of second joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of third joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

Additional joint inventors are named on separately numbered sheets attached hereto.

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(REISSUE APPLICATION DECLARATION BY THE INVENTOR, page 2)

Docket Number (Optional)

87-146R

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Joseph W. Keen	28,432
Robert J. Hampsch	36,155
Kevin M. Kercher	33,408
R. Carl Wilbur	36,056

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Address	100 NE Adams ST.			
City	Peoria	State	IL	ZIP 61629-6490
Country	USA			
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Full name of sole or first inventor (given name, family name)

Vernon R. Smith

Inventor's signature

Date

4/6/00

Residence
Peoria, IL 61615Post Office Address
708 Mossville RoadCitizenship
US

Full name of second joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of third joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

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Docket Number (Optional)
87-146R

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Full name of sole or first inventor (given name, family name)

Yasser A. Charif

Inventor's signature *Yasser Charif*

10

Residence	Farmington Hills, Michigan 48331	Date	4-11-00
Post Office Address	37655 Blossom Lane	Citizenship	US

Full name of second joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of third joint inventor (given name, family name)

Inventor's signature

Date

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Post Office Address

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(Page 2 of 2)

APR 11 2000

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	Joseph W. Keen		28,432
	Robert J. Hampsch		36,155
	Kevin M. Kercher		33,408
	R. Carl Wilbur		36,056

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Address	Patent Department, AB6490		
Address	100 NE Adams ST.		
City	Peoria	State	IL
Country	USA		
Telephone	(309) 675-4922	Fax	(309) 675-1236

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Full name of sole or first inventor (given name, family name)

Ronald D. Shinogle

Inventor's signature

Residence Peoria, Illinois	Date 4-6-00
Post Office Address 1023 W. Centennial Drive	Citizenship US

Full name of second joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

Full name of third joint inventor (given name, family name)

Inventor's signature

Date

Residence

Citizenship

Post Office Address

 Additional joint inventors are named on separately numbered sheets attached hereto.



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application for Reissue)
Of U.S. Patent No. 5,634,448)
)
RONALD D. SHINOGLE, ET AL) Art Unit: Unassigned
)
Application No. 09/322,770) Examiner: Unassigned
)
Issued: June 3, 1997) Paper No. 10
)
For: METHOD AND STRUCTURE)
FOR CONTROLLING AN)
APPARATUS, SUCH AS A)
FUEL INJECTOR, USING)
ELECTRONIC TRIMMING)
)
Attorney Docket No. 87-146 R)
)

Peoria, Illinois 61629-6490

October 28, 1999

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

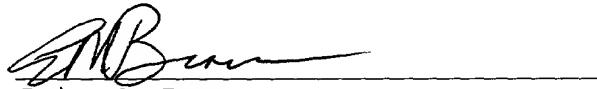
ASSOCIATE POWER OF ATTORNEY

Sir:

<p>CERTIFICATE OF MAILING</p>	
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<p>On <u>October 28, 1999</u> (Date)</p>	
<p><u>Eric M. Bram</u> _____ Attorney or Agent</p>	
<p><u>EB</u> _____ Signature</p>	
<p>Date: <u>October 28, 1999</u></p>	

The undersigned hereby appoints Larry G. Cain, Patent Office Reg. No. 31,150 telephone (309) 675-4922, Alan J. Hickman, Patent Office Reg. No. 29,649, telephone (309) 675-4517, and John J. Cheeks, Patent Office Reg. No. 39,628, telephone (309) 675-4280 as an attorney or agent, with full power of substitution and revocation, to prosecute this application and to transact all business in the Patent and Trademark Office connected with this application. Please address all correspondence to Larry G. Cain, Caterpillar Inc., Patent Department, AB6490 100 N. E. Adams Street, Peoria, Illinois 61629-6490.

Respectfully submitted,



Eric M. Bram
Registration No. 37,285
Caterpillar Inc.

Telephone: (309) 675-4922
Facsimile: (309) 675-1236
87-146R-associate power